

**NOTE TO PTO PERSONNEL:**  
**THIS PATENT APPLICATION IS BEING**  
**FILED WITH SMALL ENTITY STATUS**

TITLE: Socket With Double Functions

## FIELD OF THE INVENTION

The present invention relates to a socket for communicating machine, which owes double functions for connecting signals.

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## BACKGROUND OF THE INVENTION

Most communicating machines includes at least a socket for connecting with a signal cable to transfer the signals. Further, in order to obtain the power, a power supply socket is also necessary for connecting with a power plug. It can be found that the prior communicating machine is necessary to provide the said two sockets, which lead trouble in manufacturing and occupy a certain volume on the machine. Hence, the conventional communicating machine has a large volume, which is not easy to be decreased. It is inconvenient for carrying.

## SUMMARY OF THE INVENTION

The present invention is to provide a socket with double functions including electrical connection and signal transferring. So, the volume of the communicating machine can be efficiently decreased. Now, accompanying with the following drawings, the character of the present invention will be described here and after.

## BRIEF DESCRIPTION OF THE DRAWINGS

25 Figure 1 is a perspective view showing a socket according to the present invention.

Figure 2 is an exploded perspective view of Figure 1.

Figure 3 is a cross-sectional plan view showing the socket and a connecting cable according to the present invention.

Figure 4 is an assembled plan view of Figure 3.

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#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Please referring to Figure 1 and 2, it shows a socket (1) of the present invention, which includes a shell (11), a central hollow shaft (12). A conductive frame (2) is provided around the central shaft (12). A cap (3) is placed on front side of the socket (1), wherein the cap (1) has several inward elastic slices (31) toward front aperture of the socket (1). A signal-connecting piece (4) is inserted into the hollow shaft (12) of the socket (1).

A connecting cable (5) is formed with an outer metal layer (51) and an inner metal layer (52); both are separated by a middle non-conductive layer (53). A central signal wire (54) is provided as central axis of the cable (5).

When the cable (5) is inserted into the socket (1), the outer metal layer (51) contacts with the elastic slices (31) while the inner metal layer (52) contacts the conductive frame (2) that complete the electrical connection between the cable (5) and the socket (1). On other hand, the central signal wire (54) inserts into the shaft (12) and connects with the signal slice (4) that completes the signals transferring.

Accordingly, the socket of the present invention can provide double functions, signals transferring and electric connecting, by a single means that obtains the improvement of the invention.